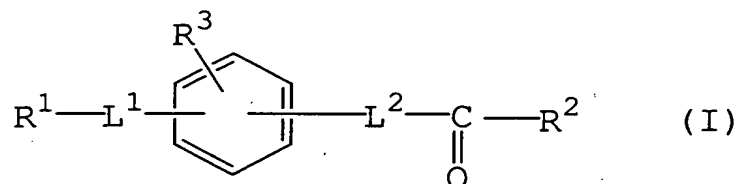


WHAT IS CLAIMED IS:

1. A compound having the following formula (I):



wherein

5  $R^1$  is N-containing heterocyclic ring optionally substituted with one or more suitable substituent(s),

$R^2$  is hydroxyamino,

$R^3$  is hydrogen or a suitable substituent,

10  $L^1$  is  $-(\text{CH}_2)_n-$  (wherein  $n$  is an integer of 0 to 6) optionally substituted with one or more suitable substituent(s), wherein one or more methylene(s) may be replaced with suitable heteroatom(s), and

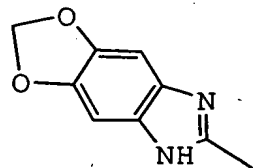
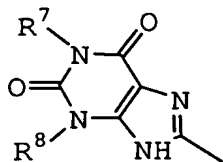
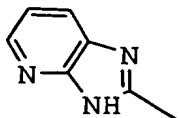
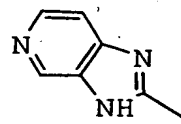
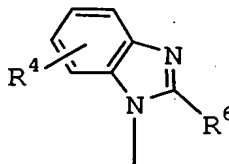
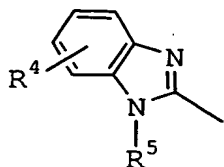
$L^2$  is lower alkenylene,

or a salt thereof.

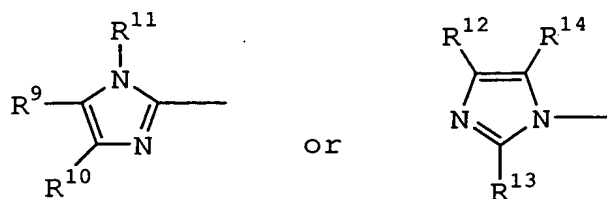
15

2. The compound of claim 1, wherein

$R^1$  is N-containing heterocyclic ring represented by the following formula:



20



wherein

$R^4$  is hydrogen or a group selected from the group consisting of

- 5 (1) lower alkyl optionally substituted with di(lower)alkylamino or hydroxy,
- (2) lower alkoxy,
- (3) aryl optionally substituted with the substituent selected from the group consisting of
- 10 halogen, lower alkanoyl, lower alkylsulfonyl, lower alkoxy and di(lower)alkylamino,
- (4) lower alkanoyl,
- (5) lower alkoxy-carbonyl,
- (6) arylcarbonyl,
- 15 (7) aryl(lower)alkoxy,
- (8) amino optionally mono- or di-substituted with substituent(s) selected from the group consisting of lower alkyl, lower alkanoyl and cycloalkyl,
- (9) halo(lower)alkyl,
- 20 (10) aryloxy,
- (11) aryl(lower)alkyl optionally substituted with hydroxy,
- (12) carboxyl,
- (13) nitro,
- 25 (14) cyano,
- (15) halogen,
- (16) heteroaryl,
- (17) non-aromatic heterocycle optionally substituted with lower alkyl,
- 30 (18) hydroxy,
- (19) (lower)alkylsulfonylcarbonyl and
- (20) non-aromatic heterocycle carbonyl,

$R^5$  is hydrogen or a group selected from the group

consisting of lower alkyl and aryl(lower)alkyl, and  
 $R^6$ ,  $R^7$  and  $R^8$  are each hydrogen or lower alkyl,  
 $R^9$  is hydrogen or a group selected from the group  
consisting of

- 5 (1) lower alkyl optionally substituted with  
di(lower)alkylamino,  
(2) aryl optionally substituted with lower alkoxy,  
(3) (lower)alkoxy-carbonyl,  
(4) cyano,  
10 (5) carbamoyl optionally mono- or di-substituted  
with (lower)alkyl,  
(6) halogen,  
(7) (lower)alkyl-carbonyl,  
(8) arylcarbonyl and  
15 (9) cyclo(lower)alkyl,

$R^{10}$  is hydrogen or a group selected from the group  
consisting of

- (1) (lower)alkylcarbamoyl,  
(2) di(lower)alkylcarbamoyl,  
20 (3) aryl optionally substituted with halogen,  
(4) (lower)alkoxy-carbonyl,  
(5) carboxy,  
(6) non-aromatic heterocycle carbonyl,  
(7) halogen,  
25 (8) (lower)alkyl optionally substituted with hydroxy,  
(lower)alkoxy, non-aromatic heterocycle, aryl,  
di(lower)alkylamino or halogen and  
(9) adamantyl,

30  $R^{11}$  is hydrogen or aryl(lower)alkyl in which the aryl  
portion is substituted with lower alkoxy,

$R^{12}$  is hydrogen or a group selected from the group  
consisting of lower alkyl and aryl optionally  
substituted with halogen,

35  $R^{13}$  is hydrogen or a group selected from the group  
consisting of lower alkyl and aryl, and

$R^{14}$  is hydrogen or lower alkyl,

R<sup>2</sup> is hydroxyamino,

R<sup>3</sup> is hydrogen or lower alkoxy,

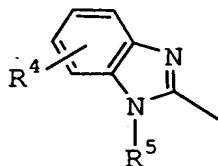
L<sup>1</sup> is -(CH<sub>2</sub>)<sub>n</sub>- (wherein n is 1 to 5) optionally substituted with one or more substituent(s) selected from lower alkyl(s) and aryl(lower)alkyl, and wherein one methylene may be replaced with an oxygen atom, and

L<sup>2</sup> is vinylene,

or a salt thereof.

10 3. The compound of claim 2, wherein

R<sup>1</sup> is N-containing condensed heterocyclic ring represented by the following formula:



wherein R<sup>4</sup> and R<sup>5</sup> are each as defined in claim 2.

15

4. The compound of claim 3, wherein

R<sup>4</sup> and R<sup>5</sup> are each hydrogen,

R<sup>2</sup> is hydroxyamino,

R<sup>3</sup> is hydrogen,

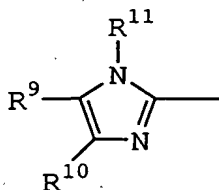
20 L<sup>1</sup> is -CH<sub>2</sub>-, and

L<sup>2</sup> is vinylene,

or a salt thereof.

5. The compound of claim 2, wherein

25 R<sup>1</sup> is N-containing heterocyclic ring represented by the following formula:



wherein R<sup>9</sup>, R<sup>10</sup> and R<sup>11</sup> are each as defined in claim 2.

30

6. The compound of claim 5, wherein

$R^9$  is hydrogen or aryl optionally substituted with lower alkoxy,

$R^{10}$  is hydrogen or aryl optionally substituted with halogen, and

$R^{11}$  is hydrogen,

5  $R^2$  is hydroxyamino,

$R^3$  is hydrogen,

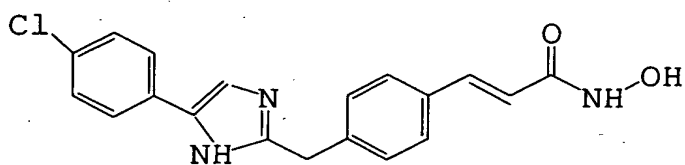
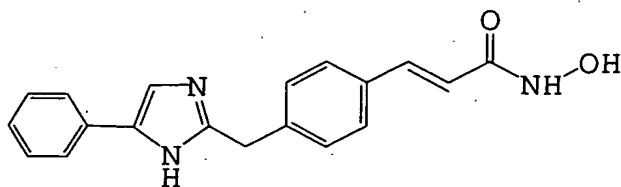
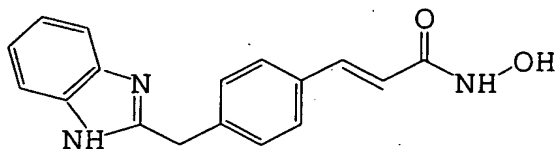
$L^1$  is  $-CH_2-$ , and

$L^2$  is vinylene,

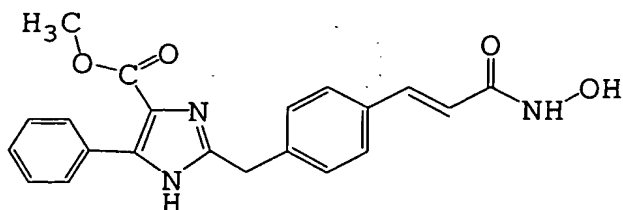
or a salt thereof.

10

7. A compound of the following formula

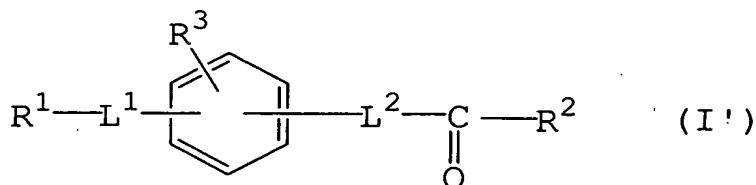


or



15 or a salt thereof.

8. A compound having the following formula (I'):



wherein

$R^1$  is N-containing condensed heterocyclic ring optionally substituted with one or more suitable substituent(s),

5  $R^2$  is hydroxyamino,

$R^3$  is hydrogen or a suitable substituent,

$L^1$  is  $-(\text{CH}_2)_n-$  (wherein  $n$  is an integer of 0 to 6) optionally substituted with one or more suitable substituent(s), wherein one or more methylene(s) may be replaced with suitable heteroatom(s),

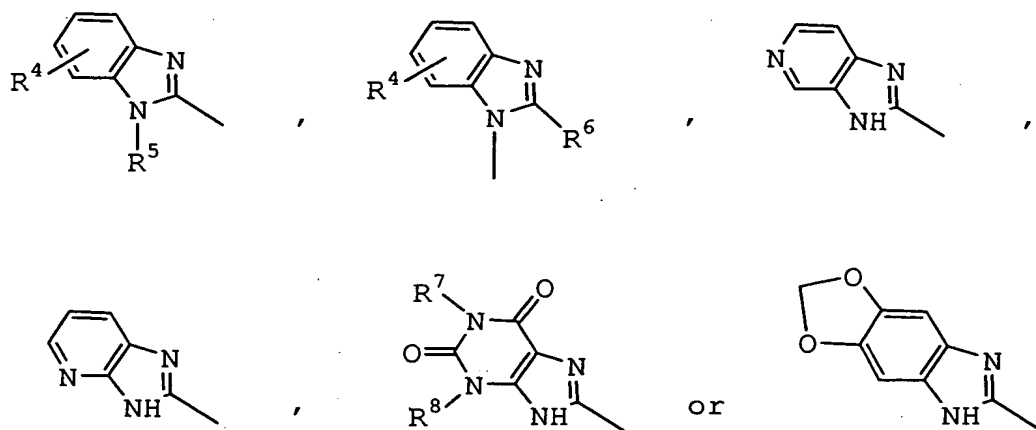
10 and

$L^2$  is lower alkenylene,

or a salt thereof.

9. The compound of claim 8, wherein

15  $R^1$  is N-containing condensed heterocyclic ring represented by the following formula:



20

wherein

$R^4$  is hydrogen or a group selected from the group consisting of

(1) lower alkyl,

- (2) lower alkoxy,  
(3) aryl optionally substituted with the substituent  
selected from the group consisting of halogen, lower  
alkanoyl, lower alkylsulfonyl, lower alkoxy and  
5 di(lower)alkylamino,  
(4) lower alkanoyl,  
(5) lower alkoxy-carbonyl,  
(6) arylcarbonyl,  
(7) aryl(lower)alkoxy,  
10 (8) amino optionally mono- or di-substituted with  
substituent(s) selected from the group consisting of  
lower alkyl, lower alkanoyl and cycloalkyl,  
(9) halo(lower)alkyl,  
(10) aryloxy,  
15 (11) aryl(lower)alkyl optionally substituted with  
hydroxy,  
(12) carboxyl,  
(13) nitro,  
(14) cyano,  
20 (15) halogen,  
(16) heteroaryl and  
(17) non-aromatic heterocycle optionally substituted  
with lower alkyl,

R<sup>5</sup> is hydrogen or a group selected from the group  
25 consisting of lower alkyl and aryl(lower)alkyl, and  
R<sup>6</sup>, R<sup>7</sup> and R<sup>8</sup> are each hydrogen or lower alkyl,

R<sup>2</sup> is hydroxyamino,

R<sup>3</sup> is hydrogen or lower alkoxy,

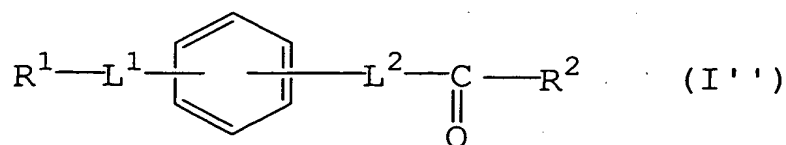
L<sup>1</sup> is -(CH<sub>2</sub>)<sub>n</sub>- (wherein n is 1 or 2) optionally substituted with  
30 one or more substituent(s) selected from lower alkyl(s) and  
aryl(lower)alkyl, and wherein one methylene may be replaced  
with an oxygen atom, and

L<sup>2</sup> is vinylene,

or a salt thereof.

35

10. A compound having the following formula (I''):



wherein

R<sup>1</sup> is N-containing condensed heterocyclic ring optionally substituted with one or more suitable substituent(s),

5 R<sup>2</sup> is hydroxyamino,

L<sup>1</sup> is -(CH<sub>2</sub>)<sub>n</sub>- (wherein n is an integer of 0 to 6) optionally substituted with one or more suitable substituent(s), and

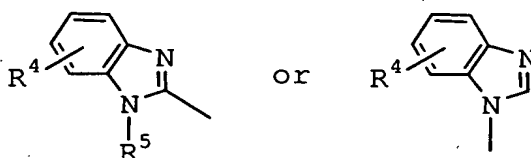
L<sup>2</sup> is lower alkenylene,

or a salt thereof.

10

11. The compound of claim 10, wherein

R<sup>1</sup> is N-containing condensed heterocyclic ring represented by the following formula:



15

wherein

R<sup>4</sup> is hydrogen or a group selected from the group consisting of lower alkyl and aryl, and

R<sup>5</sup> is hydrogen or a group selected from the group consisting of lower alkyl and aryl(lower)alkyl,

20

R<sup>2</sup> is hydroxyamino,

L<sup>1</sup> is -(CH<sub>2</sub>)<sub>n</sub>- (wherein n is 1 or 2) optionally substituted with aryl(lower)alkyl, and

L<sup>2</sup> is vinylene,

25 or a salt thereof.

12. A histone deacetylase inhibitor comprising the compound of claim 1.



13. A pharmaceutical composition for treating or preventing inflammatory disorders, diabetes, diabetic complications, homozygous thalassemia, fibrosis, cirrhosis, acute promyelocytic leukaemia (APL), organ transplant rejections, autoimmune diseases, protozoal infections or tumors, which comprises the compound of claim 1.
14. A pharmaceutical composition containing the compound of claim 1 as an active ingredient, in association with a pharmaceutically acceptable, substantially non-toxic carrier or excipient.
15. The compound of claim 1 for use as a medicament.
16. A method for inhibiting histone deacetylase, comprising using the compound of claim 1.
17. A method for treating or preventing inflammatory disorders, diabetes, diabetic complications, homozygous thalassemia, fibrosis, cirrhosis, acute promyelocytic leukaemia (APL), organ transplant rejections, autoimmune diseases, protozoal infections or tumors, which comprises administering an effective amount of the compound of claim 1 to a human being or an animal.
18. A commercial package comprising the pharmaceutical composition of claim 13 and a written matter associated therewith, the written matter stating that the pharmaceutical composition may or should be used for treating or preventing inflammatory disorders, diabetes, diabetic complications, homozygous thalassemia, fibrosis, cirrhosis, acute promyelocytic leukaemia (APL), organ transplant rejections, autoimmune diseases, protozoal infections or tumors.
19. A histone deacetylase inhibitor comprising the compound of claim 7.

20. A pharmaceutical composition for treating or preventing inflammatory disorders, diabetes, diabetic complications, homozygous thalassemia, fibrosis, cirrhosis, acute promyelocytic leukaemia (APL), organ transplant rejections, autoimmune diseases, protozoal infections or tumors, which comprises the compound of claim 7.
21. A pharmaceutical composition containing the compound of claim 7 as an active ingredient, in association with a pharmaceutically acceptable, substantially non-toxic carrier or excipient.
22. The compound of claim 7 for use as a medicament.
23. A method for inhibiting histone deacetylase, comprising using the compound of claim 7.
24. A method for treating or preventing inflammatory disorders, diabetes, diabetic complications, homozygous thalassemia, fibrosis, cirrhosis, acute promyelocytic leukaemia (APL), organ transplant rejections, autoimmune diseases, protozoal infections or tumors, which comprises administering an effective amount of the compound of claim 7 to a human being or an animal.
25. A commercial package comprising the pharmaceutical composition of claim 20 and a written matter associated therewith, the written matter stating that the pharmaceutical composition may or should be used for treating or preventing inflammatory disorders, diabetes, diabetic complications, homozygous thalassemia, fibrosis, cirrhosis, acute promyelocytic leukaemia (APL), organ transplant rejections, autoimmune diseases, protozoal infections or tumors.
26. A histone deacetylase inhibitor comprising the compound of claim 8.

27. A pharmaceutical composition for treating or preventing inflammatory disorders, diabetes, diabetic complications, homozygous thalassemia, fibrosis, cirrhosis, acute promyelocytic leukaemia (APL), organ transplant rejections, autoimmune diseases, protozoal infections or tumors, which comprises the compound of claim 8.
28. A pharmaceutical composition containing the compound of claim 8 as an active ingredient, in association with a pharmaceutically acceptable, substantially non-toxic carrier or excipient.
29. The compound of claim 8 for use as a medicament.
30. A method for inhibiting histone deacetylase, comprising using the compound of claim 8.
31. A method for treating or preventing inflammatory disorders, diabetes, diabetic complications, homozygous thalassemia, fibrosis, cirrhosis, acute promyelocytic leukaemia (APL), organ transplant rejections, autoimmune diseases, protozoal infections or tumors, which comprises administering an effective amount of the compound of claim 8 to a human being or an animal.
32. A commercial package comprising the pharmaceutical composition of claim 27 and a written matter associated therewith, the written matter stating that the pharmaceutical composition may or should be used for treating or preventing inflammatory disorders, diabetes, diabetic complications, homozygous thalassemia, fibrosis, cirrhosis, acute promyelocytic leukaemia (APL), organ transplant rejections, autoimmune diseases, protozoal infections or tumors.
33. A histone deacetylase inhibitor comprising the compound of claim 10.

34. A pharmaceutical composition for treating or preventing inflammatory disorders, diabetes, diabetic complications, homozygous thalassemia, fibrosis, cirrhosis, acute promyelocytic leukaemia (APL), organ transplant rejections, autoimmune diseases, protozoal infections or tumors, which comprises the compound of claim 10.
35. A pharmaceutical composition containing the compound of claim 10 as an active ingredient, in association with a pharmaceutically acceptable, substantially non-toxic carrier or excipient.
36. The compound of claim 10 for use as a medicament.
37. A method for inhibiting histone deacetylase, comprising using the compound of claim 10.
38. A method for treating or preventing inflammatory disorders, diabetes, diabetic complications, homozygous thalassemia, fibrosis, cirrhosis, acute promyelocytic leukaemia (APL), organ transplant rejections, autoimmune diseases, protozoal infections or tumors, which comprises administering an effective amount of the compound of claim 10 to a human being or an animal.
39. A commercial package comprising the pharmaceutical composition of claim 34 and a written matter associated therewith, the written matter stating that the pharmaceutical composition may or should be used for treating or preventing inflammatory disorders, diabetes, diabetic complications, homozygous thalassemia, fibrosis, cirrhosis, acute promyelocytic leukaemia (APL), organ transplant rejections, autoimmune diseases, protozoal infections or tumors.